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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/551,118	04/17/2000	Feng Cheng	YOR9-2000-0041	1233
30743	7590	12/29/2003	EXAMINER	
WHITHAM, CURTIS & CHRISTOFFERSON, P.C. 11491 SUNSET HILLS ROAD SUITE 340 RESTON, VA 20190			JAKETIC, BRYAN J	
			ART UNIT	PAPER NUMBER
			3627	

DATE MAILED: 12/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/551,118

Applicant(s)

CHENG ET AL.

Examiner

Bryan Jaketic

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aykin. Aykin discloses a method of managing manufacturing logistics of end products comprising the steps of maintaining an inventory of components, built to stock; configuring-to-order the end products; and replenishing the components from suppliers following a base-stock policy (see col. 2, line 66 through col. 3, line 31 and col. 3, lines 53-64). Aykin teaches that the maintained inventory is determined to meet the desired order fill rate (col. 3, lines 33-40). Aykin further teaches that the order fill rate is based on forecasts of customer orders (see col. 2, lines 44-65), and is further based on the number of order types, and the use of each component in each order type (see col. 7, line 55 through col. 8, line 8). Therefore, it is inherent that if the inventory level of each component is optimized to meet the order fill rate, such that the forecasted customer need is met without an excessive surplus inventory, the inventory cost is therefore minimized.

Aykin does not teach that the components have different costs. However, it is common in the art for different components to have different costs. It therefore would have been obvious to one of ordinary skill in the art at the time the invention was made

to employ the step of using components with different costs, because most components in most industries have different costs.

Regarding claims 2 and 6, Aykin does not teach that the end products are personal computers. However, these differences are only found in the nonfunctional descriptive material and do not alter method of managing manufacturing logistics. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, *see In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the method of Aykin for managing manufacturing logistics of computers because the type of end product does not patentably distinguish the claimed invention.

Regarding claims 3 and 7, Aykin does not disclose the use of a greedy algorithm to derive base-stock levels. However, greedy algorithms are common in the art, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a greedy algorithm as the most efficient means for deriving base-stock levels.

Regarding claims 4 and 8-15, Aykin discloses an algorithm comprising a set of components and a set of end products (col. 8, lines 1-16); the probability of no-stockout of a component and the probability of stockout of an end product (col. 4, lines 10-49); outbound leadtime (col. 8, lines 1-16); and a safety factor (col. 8, lines 29-38). Aykin does not disclose the exact algorithm of claim 4. However, it would have been obvious

to one of ordinary skill in the art at the time the invention was made to derive the algorithm of claim 4 from the equations of Aykin (columns 8 and 9) to fully describe the current inventory and needed inventory.

### ***Response to Arguments***

3. Applicant's arguments filed on 27 October 2003 have been fully considered but they are not persuasive. Applicant argues that Aykin does not teach that each component has a different cost. Examiner concedes that Aykin does not expressly state that the different components have different costs. However, it is common in the art for different components to have different costs, and Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the step of using components with different costs, because most components in most industries have different costs.

Applicant further argues that Aykin only teaches the steps of meeting a desired fill rate, and that meeting a desired fill rate is only equivalent to minimizing the total inventory cost of components when the unit cost of every component is the same. Examiner respectfully disagrees. Aykin teaches a method of optimizing inventory, based on forecasted customer orders. If inventory is optimized to meet customer need, then it is inherent that inventory costs are also optimized, because there will be no excess inventory, and hence no excess inventory costs.

Applicant also argues that Aykin does not distinguish different fill rates from component to component. Examiner respectfully disagrees. Aykin teaches steps to

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distinguish different fill rates from component to component in col. 7, line 55 through col. 10, line 14.

Applicant also argues that the application of present invention for computer components is a functional limitation because the costs of components may vary in computer manufacturing, and that an inventory managements system for personal computers must handle demand originating from multiple market segments. Examiner maintains that neither of these attributes are exclusive to the personal computer market, and that such attributes therefore do not add functionality to the limitation.

Applicant acknowledges that "greedy algorithm" is a general term that applies to virtually any algorithm that moves along the steepest descent or ascent direction, but argues that the present invention is not making any claim on a greedy algorithm as such. However, in claim 3, Applicant claims "the base-stock levels are derived from a greedy algorithm which iteratively reduces inventory budget until a budget constraint is satisfied." Examiner maintains that greedy algorithms are common in the art, and that merely claiming the use of a greedy algorithm to reduce inventory budget, without more, would have been obvious to one of ordinary skill in the art at the time the invention was made because a greedy algorithm would be the most efficient means for deriving base-stock levels.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Jaketic whose telephone number is (703) 308-0134. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on (703)308-5183. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

bj

A handwritten signature in black ink, appearing to read "Bryan Jaketic", is written over the "bj" text.